

**Institutional and Social Drivers of Agropreneurial Intention:
Unveiling the Mediating Role of Entrepreneurial Drive**

Saleem Ullah Khan

Lecturer, Institute of Business and Management Sciences (IBMS), The
University of Agriculture Peshawar, KP, Pakistan

salimullahmarwat@hotmail.com

Muhammad Fahad Siddiqi

Lecturer, Institute of Business and Management Sciences (IBMS), The
University of Agriculture Peshawar, KP, Pakistan

mfahadsiddiqi@yahoo.com

Abstract

In agrarian countries, the "agropreneurship" phenomenon, that is the application of entrepreneurial practices in the agriculture field, is steadily and progressively gaining traction. However, agropreneurship remains a relatively less preferred domain among the younger generation. This makes investigating the influencing factors that could lead to increasing young individuals' intentions to engage in agropreneurship as an imperative and worthwhile academic pursuit. In this vein, the current study sets out to determine those social, as well as institutional factors, that may enhance the agropreneurship intention among the young agricultural students, focusing specifically on the role of entrepreneurial drive as a mediator. A survey questionnaire was used to collect the primary data from final-year students pursuing degrees in agriculture and related fields at public sector Higher Education Institutions (HEIs) in China and Pakistan. 330 responses in total, selected through proportional allocation method, were included in the study. For analyzing the data, the Structural Equation Modeling (SEM) and the Process approach were employed. The results of this study indicate that institutional factors like perceived support from universities, social factors like subjective norms, perceived government support, and social networking are important determinants influencing agropreneurial intention of students studying agriculture. However, the curriculum and content of agropreneurship education were not found to have any significant impact. Furthermore, the results demonstrate that entrepreneurial drive significantly impacts agropreneurial intention of these students. Our findings further indicate that the relationship between institutional factors, social factors, and agropreneurial intention is mediated by the entrepreneurial drive construct. On the other hand, the entrepreneurial drive did not significantly mediate the relationship between the agropreneurship curriculum, social networking, and

agropreneurial intention. These findings hold practical value for policymakers and academics interested in identifying key factors that can foster agropreneurship intentions among students in agricultural disciplines. Finally, this research acknowledges its limitations and provides suggestions for further studies.

Keywords: Agropreneurial curriculum, perceived university support, social networking, agropreneurial education, agropreneurial intention, subjective norm, perceived government support, entrepreneurial drive

1. INTRODUCTION

Entrepreneurship is widely considered as a primary catalyst for the growth of an economy, primarily through job creation (Gu & Wang, 2022; Zarkua, et al., 2025; Vatavu et al., 2022; Wennekers & Thurik, 1999; Joseph, 2025; Ghiasy et al., 2009; Osabohien et al., 2022). The role of entrepreneurship in the agriculture sector, local and national, is well documented in the scholarly literature (Sinyolo & Mudhara, 2018; Díaz-Pichardo et al., 2012; Bruton, Ketchen, & Ireland, 2013). Entrepreneurship has been examined through various lenses across diverse academic domains. In the agriculture field, the focus on entrepreneurship occurred when individuals developed a vested interest in leveraging novel conceptualizations, dimensions, and commercialization of agricultural products. This consolidation has come to be referred to as 'agropreneurship.' (Selamat and Nasir, 2013). According to Bairwa *et al.* (2014), agropreneurship enhances agricultural performance and, consequently, plays a pivotal role in alleviating poverty levels and fostering employment opportunities through the augmentation of individuals' innovative and creative capacities (Osikabor *et al.*, 2011). Several scholars assert that agropreneurship represents one of the most favorable approaches in enhancing economic viability. Furthermore, they contend that agropreneurship has the potential to render agriculture more appealing and productive, thereby fostering employment opportunities, generating income, and making a substantial contribution to the overall augmentation of national income (Osikabor *et al.*, 2011). In developing countries, agriculture sector provides various employment opportunities, but it is not generally regarded as a reliable and secure source of income. Thus, many young people turn to agropreneurship as their final resort to protect themselves from poverty (Zagata & Lostak, 2013; Jochaud, 2014; Dhanapal Chelliah & Christopher, 2025) Kuis et al., 2014; Heinert & Roberts, 2016). According to Weidinger et al. (2015), agropreneurship is an alternative source of income to the young population of developing countries, especially for those who face limited formal job opportunities. Several studies have shown that agropreneurship is an effective strategy to combat youth unemployment by setting up market-oriented agricultural businesses (D'souza, 2013; Hrangao & Sorokhaiban, 2015).

Earlier studies have emphasized the importance of agricultural education to improve the productivity and income of farmers (Heanue &

Donoghue, 2014; Alam et al., 2009). The field, however, has not changed much with regards to the changing environment and the growing level of unemployment in the job market. (Sanginga et al., 2015; AGRA, 2015). A study by Ramdwar and Ganpat (2010), reveals that students at institutes teaching agricultural courses are more inclined to take up agropreneurship as a career option compared to those without such courses. However, there are studies, including those by Bojang and Ndeso-Atanga (2013) that show that the young graduates do not see agropreneurship as a major source of financial returns, while Eissler and Brennan (2015) found that it is mostly the least educated segments of the population that view it as a viable career. In the same manner, some training institutions in the past have also observed similar situation with regard to low interest in agropreneurship as a career option among the young graduates (URT and IIEP, 2011; Kabutiei, 2025; Christian, 2002). A similar study conducted by Zakaria et al. in 2014 revealed that the attitude of students toward agribusiness enterprises had significant impact on the agropreneurial intention. Likewise, Shiri et al. (2012) found that the entrepreneurial motivation level among students who took agribusiness courses ranged from moderate to high and accounted for 35.5% of the variance.

With growing rate of unemployment among young generation, and the rising poverty rate, there is an urgent need for entrepreneurial initiatives in agriculture sector (ILO, 2014; Geza et al., 2022; White, 2012; Bairwa et al., 2014). In the field of entrepreneurial study, it is known that entrepreneurial education alone is not the only variable that determines agropreneurship intention, but there are other things that can trigger students entrepreneurial inclination. For example, Farah and Samah (2014) have recognized social and environmental factors as important aspects that stimulate students in agricultural fields to become entrepreneurs. In the same way, the research conducted by Sri and Heru (2018) indicated that the factor affecting the individual and the external environment are the main determining factors in farming organic rice fields. This research by Lee et al. (2011) and Liu & Yao-Ping Peng, (2025) also found that both the personal and organizational factors have significant impact on entrepreneurial intention, whereas the research by Hou et al. (2019) explores the entrepreneurial intention from the individual, school and family perspectives in China. In addition, Singh et al. (2017) & Freitas et al. (2025) studied entrepreneurial intent by analyzing the role of socio-cultural factors on entrepreneurial intent. Hence, the present study is designed to explore the impact of social and institutional determinants on entrepreneurial intention through mediation of entrepreneurial drive among students of agriculture related discipline in China and Pakistan.

II. LITERATURE REVIEW

2.1 Institutional level factors:

From the available literature, it can be seen that scholars are increasingly interested in studying the roles played by institutions, especially education institutions, in influencing the entrepreneurial intention of the students.

Likewise, prior researches, such as those by Muhammad et al. (2013) and Rezai (2011) focusing on agropreneurship, also explored agropreneurship education as supportive element in universities. Mahmud et al. (2011) were also focused on similar. Based on the results of these studies, academic institutions, particularly agricultural universities, are seen to be having an important role in developing future agropreneurs by giving guidance and developing entrepreneurial attitude among the youth. Therefore, it is important to take into account the role of institutions (perceived university support, agropreneurship curriculum, agropreneurship pedagogy) in developing students' intention for self-startups.

2.1.1 Curriculum & content of entrepreneurship and entrepreneurial drive

Academic literature has consistently shown that entrepreneurial pedagogy has significant impacts on the entrepreneurial propensity of young college graduates (Walter et al., 2013; Rauch & Hulsink, 2015; Murugesan & Jayavelu, 2015; Linan et al., 2013; Hattab, 2014; Farashah, 2013; Pouratashi, 2014). The scholars reported that the purpose of entrepreneurial education is to inspire entrepreneurial motivation, facilitate the acquisition of entrepreneurial skills, and develop the entrepreneurial opportunistic identification and grasp (JorgeMoreno et al., 2012). Moreover, entrepreneurship education is associated with facilitating the perceived entrepreneurial attractiveness and potential of young graduates (Saeed et al., 2013; Peterman & Kennedy, 2003). Furthermore, the current body of literature as emphasized the need for a proper curriculum and content in creating an entrepreneurial mindset among students, in arousing their interest and their readiness to participate in entrepreneurship-related activities and to acquire entrepreneurial skills and capability (Muhammad et al., 2013; Heinonen, 2007). Keat et al. (2011) examined the relationship between entrepreneurial curriculum and content, and students' entrepreneurial intentions in Malaysian universities and found a considerable positive correlation. They also report that entrepreneurial education has improved pupils' chances of being involved in entrepreneurial ventures. The same results have been found in the literature in relation to agropreneurship education. Mohamed et al. (2012) discovered that agropreneurship education fosters interest in agropreneurship among students and changes their mindset from that of an employee of an existing firm to an agropreneur. Donckels (1991) identified that an agropreneurship curriculum at the tertiary level contributes to improve the awareness of entrepreneurship and the feasibility of starting and running a business, thus providing an impetus to entrepreneurial intentions of the students. Yusoff, Ahmad & Halim (2015) have found that curriculum and content of agropreneurship encourage entrepreneurial drive among young university graduates in emerging economies. Accordingly, on the basis of these findings, the following hypothesis is proposed:

H1: Entrepreneurial curriculum & content significantly effect the students' entrepreneurial drive

2.1.2 Perceived university support and entrepreneurial drive

A university is an important and vital platform where students learn from different fields of study, and thus acquire the knowledge and skills necessary to become successful entrepreneurs. Perceived university support, as defined by Souitaris et al. (2007), is the perception of a supportive environment in the university that allows students to carry out agricultural-related business activities. Past studies have shown that a supportive entrepreneurial climate within the university encourages students to pursue entrepreneurial endeavors (Schwarz et al., 2009). Moreover, researchers have suggested that a positive university culture reflects the overall possibility and societal acceptance of entrepreneurship, which is essential to embed and nurture the entrepreneurial spirit in students (Walter et al., 2013; Liñán et al., 2013). Likewise, the university infrastructure, the supportive environment are also significant in influencing students' attitude towards the feasibility of entrepreneurship (Peterman & Kennedy, 2003). Similarly, greater university support leads to higher perceived entrepreneurial capability to undertake entrepreneurial activities among students (Saeed et al., 2013; Hashemi et al., 2012). In addition, university-based resources such as university incubators, physical facilities, new business creation methods, and university venture capital funds can stimulate students' interest in entrepreneurship (Lerner, 2005; Ollila & Williams-Middleton, 2011). Moreover, an education organization that develops a supportive climate for such processes can nurture entrepreneurial attitudes among students by building confidence in them to launch their own businesses (Kraaijenbrink et al., 2010). Likewise, Mustafa et al. (2016) emphasized that the perceived institutional support plays a vital role in improving students' entrepreneurial motivation by increasing their self-efficacy, knowledge, and confidence. Yusoff, Ahmad & Halim (2015) and Galvão et al. (2025) conducted a study in Malaysia that found a positive relationship between student's perception of their university's supportive environment and their entrepreneurial motivation. In conclusion, the supportive atmosphere of universities plays a vital role in nurturing students' venturing aspirations by building a sense of confidence, knowledge, and self-efficacy and encouraging and supporting entrepreneurial activities. As such, we hypothesize that

H2: The perceived university support is positively related to entrepreneurial drive of the university students

2.2 Social Level factors

Moreover, it is important to acknowledge that entrepreneurship is not an isolated phenomenon, but is embedded in a dynamic social context and the interconnected world. Hence, social-level issues (Sadeghi et al., 2013) should be paid special attention. Therefore, it is advisable that in addition to talking about the individual level factors that are contributing to the development of agropreneurs, they should also pay special attention to the environmental level factors such as economic, cultural and social factors (Lent, 2000). The social drivers such as government support, subjective norms and social

networking have a significant influence on people's intentions to go into business for themselves (Lüthje and Franke, 2004).

2.2.1 Subjective norm and the entrepreneurial drive

An agropreneurship attitude and intention of an individual is determined by the response of family members, relatives, teachers and close friends, which is then followed by their behavior in engagement with agropreneurship activities (Ajzen, 1991, 2001). It is a key factor in determining the desirability and feasibility of engaging in entrepreneurial activity by offering a favourable environment by means of support and opinions from individuals and reference groups (Fernández-Pérez et al., 2014; Fayolle and Liñán, 2014; Entrialgo and Iglesias, 2016). In the literature, there is an affirmative and consistent correlation between the subjective norm and perceived desirability and feasibility of behavior (Santos et al., 2016; Liñán et al., 2013; Liñán and Chen, 2009; Entrialgo and Iglesias, 2016; Buttar, 2015). In this sense, a meta-analysis study has been carried out to find that subjective norm is a factor that can be added to the improvement of the entrepreneurial drive of people (Schlaegel & Koenig, 2014). The analysis of entrepreneurial perceptions among university students carried out in Spain and Great Britain also has shown a positive relationship between the students' subjective norms and their entrepreneurial drives (Liñán et al., 2013). Furthermore, Peng et al., (2013) surveyed university students and training participants for businessmen in China and found that perceived viability and attractiveness of university students' entrepreneurial activities were positively associated with their subjective norms. Chang et al., (2014) surveyed businessmen for university students in Taiwan and also concluded that the level of students' entrepreneurship viability and attractiveness were positively associated with their subjective norms. According to Joensuu-Salo et al. (2015), the opinion of influential groups, opinion leaders, persons or entities which has significance to the person contributes to high entrepreneurial intention and high attractiveness of entrepreneurship.

H3: Students' subjective norm significantly effect the entrepreneurial Drive.

2.2.2 Social networking and entrepreneurial drive

Social networking is defined as the relationships and linkages between persons or actors for a particular purpose (Fernández-Pérez et al., 2014). Similar perspectives are given by Hoang and Antoncic (2003) and Rampersad et al. (2012). Likewise, Fernandez-Perez et al. (2014) and Quan (2012) have generally acknowledged that social networking is an important factor in understanding and later investigating the entrepreneurial process. In the entrepreneurial world, it is seen as one of the significant factors that makes the various tangible means or resources like finance and technology accessible as well as the intangible resources like market know-how & skilled human capital. Social networking is known to be important in supporting the entrepreneurial initiative and enabling the formation of new businesses. Others, like Tatarko & Schmidt (2016), consider the social networking

dimension of social capital as a factor that can assist toward creating an entrepreneurial drive by affecting the entrepreneurial attitude and perceived behavioral control of people. Social capital, Digi-finance skills, physical space, knowledge and technology are all examples of a wide range of resources that can be made available to help develop entrepreneurial attitude and to help identify and take up business opportunities (Solesvik et al., 2012). Social networking is playing a pivotal role in the recognition of business opportunities, mobilization of funds and functioning as an immediate resource to the business startups (Quan, 2012). Thus, we hypothesize that:

H4: Social networking significantly effect the entrepreneurial drive.

2.2.3 Perceived Government support and entrepreneurial drive

The agropreneurship environment is rich in dynamics, and there are many challenges along the entire entrepreneurial journey (Kahan, 2014). Government support is critical in tackling these challenges and fostering agropreneurship in both developed and developing countries (Ariff and Abubakar, 2003). The government by providing enabling policies, fosters an environment for business that allows people to take risks and start their own businesses (Gnyawali & Fogel, 1994). For many entrepreneurs with little or no capital, government assistance is vital to their business during the initial stages of operation (Fatoki, 2010). Researchers have found that peoples' perceptions of their governments' support can increase their chance of agropreneurship intention even though the agropreneurship environment can be risky for these people (Lüthje and Franke, 2004). However, there is limited studies exploring the effect of government supportive policies on the intention to engage in agropreneurship among young graduates. Fatoki (2010) noted that government and family support, as well as lack of knowledge, are factors to be considered as constraints for youth as entrepreneurs. Another research studied government support in the environmental perspective revealed that those students who perceived the government support higher had a stronger intention to become agropreneurs. Based on this, we hypothesize that:

H5: Perceived government support significantly effect the students' entrepreneurial drive.

2.3 Entrepreneurial drive and Agropreneurial intention

Entrepreneurial drive has been studied from different angles concerning the business intention and has produced conflicting results. Nevertheless, some researchers have found a positive relationship between the perceived desirability and the perceived feasibility of engaging in entrepreneurial activities and entrepreneurial intention (Giordano Martínez et al., 2017). García-Rodríguez et al. (2015) and Hattab (2014) report similar findings. The study has also confirmed that the perceived feasibility and desirability of individuals is one of the key factors that can greatly predict the entrepreneurial intention (Giordano Martínez et al., 2017; Yousaf et al., 2015; Dissanayake, 2014). According to Solesvik et al. (2012), students with higher perceptions of desirability and feasibility will show greater intentions to enter

the start-up arena. Similar results were found by Shiri et al. (2012) among university students. Moreover, despite the fact that perceived desirability is a stronger determinant than perceived feasibility on the intention to become an entrepreneur (Byabashaija and Katono, 2011), Iakovleva & Kolvereid (2009) argue that the two constructs can be merged into one variable. Their results showed that the interaction of perceived desirability and feasibility had a significant impact on entrepreneurial intention of the students. The same opinion is given by Yusoff et al., (2015). Thus, our hypothesis is that;

H6: Entrepreneurial drive significantly effect students' agropreneurial intent.

2.4 The Mediating affect of entrepreneurial drive

Several factors have been identified at various levels (individual, institutional and social) that can serve as determinants of the entrepreneurial drive (Mohd.). Nasurdin et al., 2009; Schlaegel & Koenig, 2014; Saeed et al., 2015; Liñán et al., 2013; Solesvik et al., 2012). Moreover, empirical studies reveal that entrepreneurial intention is positively related to entrepreneurial drive, indicating that entrepreneurial drive can be used as mediator between entrepreneurial intent and its various drivers/determinants (Giagtzi, 2013; Saeed et al., 2014; Nimalathasan & Achchuthan, 2012). Numerous studies have discuss the entrepreneurial drive, as a construct of feasibility and desirability (perceived), in different context (Saeed et al., 2014; Sajjad et al., 2012; Ali et al., 2012). Similarly, Drennan et al. (2005) conducted a study of students in Australia and discovered that these three factors i.e. re-location, family business experience and difficult childhood experiences had an indirect relationship with entrepreneurial intention through the entrepreneurial drive. Byabashtaija and Katono (2011) did a survey on university students in Uganda and found that there was a significant indirect relationship between societal social norms and entrepreneurial intention, mediated by entrepreneurial drive. Furthermore, Shiri et al. (2012) found in a study conducted in Iran that the entrepreneurial desirability (perceived) of the individuals was the intervening variable between the environmental factors (social norms, social support, and role models) and entrepreneurial intention. Based on these studies, we propose;

H7: Entrepreneurial drive acts as a significant mediator between curriculum and content of agropreneurship education and agropreneurial intent.

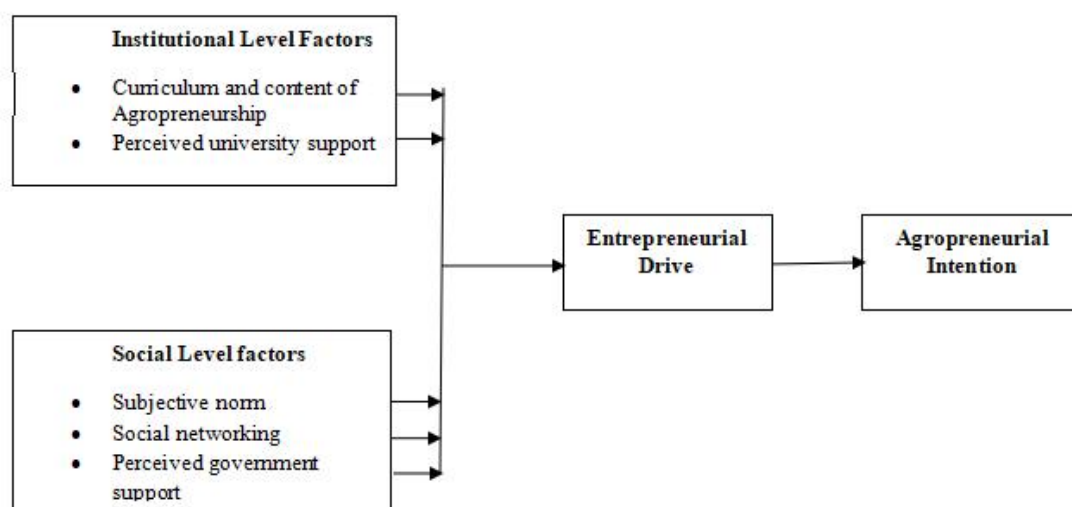
H8: Entrepreneurial drive acts as a significant mediator between perceived university support and agropreneurial intent.

H9: Entrepreneurial drive acts as a significant mediator between subjective norm and agropreneurial intent.

H10: Entrepreneurial drive acts as a significant mediator between social networking and agropreneurial intent.

H11: Entrepreneurial drive acts as a significant mediator between perceived government support and agropreneurial intent.

2.5 Theoretical framework



III. METHODOLOGY

The study population included the final year students of agriculture and related education programs of public sector higher education institutes (HEIs) from China and Pakistan. They were selected because they were about to complete their studies and join the workforce. In each country two HEIs were approached, and 330 respondents were selected from each of these HEIs using statistical sampling as described by Krejcie & Morgan (1970). The proportional sampling method was then followed for each of the HEIs depend upon its population size. A total of 330 questionnaires were sent, and 300 were deemed suitable for analysis. The data was collected using survey method with structured questionnaire. The questionnaire has been adapted from the results of previous studies conducted by other researchers. The agropreneurial intention (Thompson, 2009) was measured using 6 items, entrepreneurial drive (Krueger & Kickul, 2006) using 6 items, curriculum & content of agropreneurship education (Saeed et al., 2015) using 9 items, perceived university support (Keat et al., 2011) using 4 items, perceived social networking (Taormina & Lao, 2007) using 4 items and perceived government support (Malebana, 2014) using 5 items. The scale used to measure the variables of the study was a five point likert scale. Data analysis was performed using Hayes process method.

IV. DATA ANALYSIS

4.1 Descriptive Analysis

The data collected is presented descriptively in Table 1, showing the age, gender, and country information. Of the 300 selected respondents, 180 (60%) were aged between 17-22 years and 120 (40%) between 23-30 years. In terms of gender, 250 were male respondents (83.3%) whereas 50 (17.7%) were female. From a frequency table, it is seen that 190 respondents (63.3%) were Chinese nationals and 110 respondents (36.7%) were Pakistani nationals out of the total respondents 300.

Table 1: Descriptive statistics

Criteria	Category	Frequency	Percentage	Cumulative Percent
Age	17 to 22 Years	180	60	60
	23-30 Years	120	40	100
	Total	300	100	
Gender	Male	250	83.3	83.3
	Female	50	17.7	100
	Total	300	100	
Nationality	China	190	63.3	63.3
	Pakistan	110	36.7	100
	Total	300	100	

4.2 Reliability and Validity Analysis

The results presented in Table 2 provide evidence that the measurement model demonstrates acceptable reliability and validity across all constructs. The factor loadings are generally satisfactory, with most indicators showing values above 0.40, suggesting that the items adequately represent their respective latent constructs. Cronbach's alpha values range from 0.83 to 0.97, indicating strong internal consistency among the measurement items. The Average Variance Extracted (AVE) values range from 0.60 to 0.85, exceeding the 0.50 criterion and supporting adequate convergent validity. Likewise, Composite Reliability (CR) values range from 0.85 to 0.97, confirming strong construct reliability. Overall, the findings indicate that the measurement constructs possess satisfactory internal consistency, composite reliability, and convergent validity, providing an adequate foundation for subsequent statistical analysis.

Table 2

Factor Loading Values	Cronbach alpha	AVE	CR	Factor Loading Values	Cronbach alpha	AVE	CR
Subjective norm (SN)				Entrepreneurial Intention (ENTIN)			

SN1	0.782				ENTIN1	0.943			
		0.88	0.66	0.88	ENTIN2	0.908	0.97	0.85	0.97
S	1.003				ENTIN3	0.922			
N2					ENTIN4	0.899			
SN3	0.658				ENTIN5	0.959			
SN4	0.766				ENTIN6	0.912			
Perceived social networking (PISN)					Entrepreneurial drive(ENTDR)				
PISN1	0.430				ENTDR1	0.859			
		0.83	0.60	0.85	ENTDR2	0.818	0.95	0.75	0.95
PISN2	0.840				ENTDR3	0.851			
PISN3	0.864				ENTDR4	0.863			
PISN4	0.879				ENTDR5	0.892			
Perceived government support (PAGS)					ENTDR6	0.934			
PAGS1	0.948				Curriculum & content of agropreneurship education				
PAGS2	0.813	0.88	0.61	0.88	CCAIE1	0.915			
PAGS3	0.787				CCAIE2	0.852			
PAGS4	0.688				CCAIE3	0.835	0.96	0.75	0.96
PAGS5	0.650				CCAIE4	0.920			
Perceived university support (PUC)					CCAIE5	0.880			
PUS1	0.88				CCAIE6	0.836			
PUS2	0.879				CCAIE7	0.840			
		0.96	0.74	0.95	CCAIE8	0.855			
PUS3	0.831								
PUS4	0.899								
PUS5	0.889								
PUS6	0.926								

PUS7 0.728

CCAE9 0.855

4.3 Hypothesis Testing

4.3.1 Direct path of independent variables and mediating variable

The regression results presented in Table 3 examine the effects of CCAE, PUS, SN, PISN, and PGS on ENTDR. The findings show that CCAE has statistically insignificant relationship with ENTDR ($\beta = 0.048$, $p = 0.285$). Since the p-value is greater than 0.05, the effect of CCAE is not statistically supported. In contrast, PUS has a positive and significant effect on ENTDR ($\beta = 0.126$, $p = 0.033$), indicating that an increase in PUS is associated with an increase in ENTDR. Similarly, SN demonstrates a positive and significant relationship with ENTDR ($\beta = 0.117$, $p = 0.016$). PISN also has a positive and statistically significant effect ($\beta = 0.160$, $p = 0.046$). Finally, PGS emerges as the strongest predictor of ENTDR, with a coefficient of 0.832, and $p < 0.001$. Overall, four predictors i.e PUS, SN, PISN, and PGS significantly and positively influence ENTDR, whereas CCAE does not demonstrate a significant effect. Our results therefore confirmed H2, H3, H4, and H5 but not H1.

Table 3

Effects	B	S.E	C.R	P
ENTDR <--- CCAE	.048	.045	1.069	.285
ENTDR <--- PUS	.126	.059	2.127	.033
ENTDR <--- SN	.117	.049	2.402	.016
ENTDR <--- PISN	.160	.080	1.993	.046
ENTDR <--- PGS	.832	.076	10.898	***

4.3.2 Direct path of mediating variables and dependent variable

The regression results in Table 4 indicate a positive and statistically significant relationship between ENTDR and ENTINT. The estimated regression coefficient is 0.909, which suggests that a one-unit increase in ENTDR is associated with an estimated 0.909-unit increase in ENTINT. Moreover, the reported significance level ($p < 0.001$), confirms that the relationship is statistically significant. Therefore, the findings provide strong empirical evidence that ENTDR significantly and positively influences ENTINT, supporting the proposed relationship (H6) between ENTDR and ENTINT.

Table 4

	B	S.E	C.R	P
ENTINT <<< ENTDR	.909	.099	9.189	***

4.3.3 Mediation analysis of Entrepreneurial Drive

The Hayes PROCESS mediation analysis shows that ENTDR plays a significant mediating role in the relationships between PUS, SN, and PGS and entrepreneurial intention (ENTINT). The indirect effects of PUS ($\beta=0.014$ & $p=0.040$), SN ($\beta= 0.001$ & $p=0.038$), and PGS ($\beta=0.050$ & $p=0.010$) are statistically significant, indicating that these variables influence entrepreneurial intention through ENTDR. Among them, PGS results indicates partial mediation, as both its direct effect ($\beta=0.811$ & $p=0.004$) and indirect effect are significant. In contrast, the indirect effects of CCAE

($\beta = -0.079$ & $p = 0.601$) and PISN ($\beta = -0.030$ & $p = 0.463$) are insignificant, suggesting that ENTDR does not significantly mediate their relationships with entrepreneurial intention. Overall, the findings suggest that ENTDR acts as an important mechanism through which PUS, SN, and particularly PGS contribute to entrepreneurial intention (H8, H9 and H11 supported), whereas the mediation hypotheses concerning CCAE (H7) and PISN (H10) are not supported.

Table 5:

Paths	Direct effect	Indirect effect	Total effect	Lower & Upper Bound
CCAE->-ENTDR->-ENTINT	$\beta = -.076$, p=0.282	$\beta = -.079$, p=0.601	$\beta = -.233$, p=0.425	-.079...0.122
PUS->>-ENTDR->-ENTINT	$\beta = -.128$, p=0.465	$\beta = 0.014$, p=0.04	$\beta = -.004$, p=0.052	.014 ... 0.261
SN-->>>ENTDR-->ENTINT	$\beta = -.411$, p=0.221	$\beta = 0.001$, p=0.038	$\beta = -.364$, p=0.402	.001 ... 0.147
PGS-->>ENTDR->>ENTINT	$\beta = 0.811$, p=0.004	$\beta = 0.05$, p=0.010	$\beta = 1.083$, p=0.02	.050 ... 0.457
PISN->>ENTDR->>ENTINT	$\beta = -.137$, p=0.193	$\beta = -.03$, p=0.463	$\beta = -.133$, p=0.190	-.032... 0.139

V. Conclusion and Recommendation

5.1 Conclusion

The findings of this study provide important insights into the institutional and social factors that shape agropreneurial intentions among agricultural students in China and Pakistan. Overall, the results demonstrate that agropreneurial intention is not determined solely by formal agricultural or entrepreneurship education; rather, it is strongly influenced by the institutional environment, social expectations, external support, and students' entrepreneurial drive. In particular, perceived university support, subjective norms, social networking, and perceived government support were found to have significant and positive effects on entrepreneurial drive, whereas curriculum and content of agropreneurship education did not demonstrate a statistically significant relationship with entrepreneurial drive. These findings suggest that the development of agropreneurial aspirations among students depends considerably on the broader ecosystem within which entrepreneurial learning takes place.

The level of perceived university support showed a significant positive correlation with entrepreneurial drive, suggesting that universities have the potential to be a key factor in motivating students to become agropreneurs. The finding indicates that students who perceive their universities as supportive of entrepreneurial activities are more likely to build their motivation and confidence to think about entrepreneurship as a career choice. This is in line with the suggestion that the universities can foster an entrepreneurial environment using their institutional tools, policies, incubation facilities, mentorship and business development opportunities. The finding is also aligned with the findings of previous studies cited in the study, which is particularly the role of institutional support and entrepreneurial culture in developing entrepreneurial attitude of students (Kraaijenbrink et al., 2010; Walter et al., 2013; Liñán et al., 2013). The discovery thus strengthens the belief that universities should go beyond the mere transfer of knowledge in agriculture and develop a space for students to experiment with entrepreneurial options. Subjective norms also showed a

strong significant relationship with entrepreneurial drive. The result suggests the significance of the social environment in affecting students' perceptions of entrepreneurship. Family members, friends, teachers, peers, and other influential reference groups all shape the views and attitudes of agricultural students. If entrepreneurship is seen positively by these groups, students may find agropreneurship as a better and acceptable career choice. The result was in line with the theoretical assumptions of the Theory of Planned Behavior, as well as the previous studies mentioned in the paper. Specifically, the findings are consistent with those of Shiri et al., (2012) and Tripopsakul (2025) which found that subjective norms play an important role in the development of self-employment and entrepreneurial intentions. Therefore, the promotion of agropreneurship should not only be institutional but in addition the cultivation of a friendly social culture that accepts agricultural entrepreneurship as a valid and appealing profession. The significant effect of social networking on entrepreneurial drive further demonstrates the importance of social capital in the development of agropreneurial aspirations. The networks can offer information, knowledge, mentors, financial resources, technologies, markets, and business partner opportunities for the students. As a result, students with a stronger entrepreneurial network could be more likely to recognize and assess agricultural business opportunities. The study results are consistent with the literature reviewed, with studies by Quan (2012), Semrau and Werner (2014) and Miralles et al. (2015) highlighting the role that social networks play in opportunity recognition and resource mobilization. It suggests that institutions of learning and policy makers should provide networking platforms for students with successful agropreneurs, agricultural businesses, investors, industry experts and government agencies. Perceived government support had the strongest positive relationship with entrepreneurial drive ($\beta = 0.832$, $p < 0.001$) among all predictors studied. This is a key finding, as agricultural entrepreneurship can present significant financial, infrastructural, regulatory, and market barriers. Agropreneurship might be more attractive to students when they feel that the government offers them conducive conditions such as policies, institutional support, training, subsidies, infrastructure, market access, and other support mechanisms for entrepreneurship. The result aligns with the literature which indicates that government support could ease perceived barriers and boost confidence in entrepreneurial activities (Khan & Shah, 2020). Thus, government intervention becomes a particularly relevant part of the agropreneurial ecosystem in the above situational contexts explored in this study.

Contrary to this, the curriculum and content of agropreneurship education failed to show a statistically significant influence on entrepreneurial drive ($\beta = 0.048$, $p = 0.285$). This finding is significant as it contrasts with a significant amount of previous research which has found that entrepreneurship education and curriculum is an influential factor in entrepreneurial motivation and intention. This discovery suggests that the

current course on agropreneurship is not well suited to the needs of modern agricultural enterprises. A theoretical-based curriculum may not adequately instill the self-assurance, skills, opportunity-recognition abilities, marketing understanding, communication abilities, and practical competencies to launch and run an agricultural business. However, it is not a reason to interpret insignificant finding as to the lack of importance of agropreneurship education, but rather as a clue to the need to improve the relevance, quality and practical orientation of the curriculum. The study itself indicates that agricultural education should be revisited and updated to include entrepreneurial, technical, interpersonal, communication, marketing, research and value-addition skills.

The results also confirm that entrepreneurial drive is a critical determinant of agropreneurial intention. The regression coefficient of entrepreneurial drive on entrepreneurial intention was 0.909 and the p value was < 0.001 , indicating a significant and strong positive relationship. The result suggests that the perception of the desirability and feasibility of entrepreneurship significantly increases the intention to engage in agropreneurship among students. The result aligns with previous research mentioned in the paper and further confirms the argument that entrepreneurial drive is one of the important psychological mechanisms that help contextual factors to be translated into entrepreneurial intentions. This mechanism is explored further through the mediation analysis. The relationship between perceived university support, subjective norms and perceived government support with agropreneurial intention was significantly mediated by entrepreneurial drive. The indirect effects were significant for perceived university support ($\beta = 0.014$, $p = 0.040$), perceived government support ($\beta = 0.050$, $p = 0.010$), and perceived subjective norms ($\beta = 0.001$, $p = 0.038$). The findings suggest that institutional and social factors not only affect agropreneurial intention directly but also can affect through strengthening entrepreneurial drive among students. The mediating effect of entrepreneurial drive between government support and entrepreneurial intention indicates that policies fostering the entrepreneurship intention would be more effective if they strengthen students' perceived desire and ability to become agropreneurs. The mediation results also indicate that there is no significant evidence of entrepreneurial drive in the process of mediating the relationship between curriculum & content, social networking and agropreneurial intention. The indirect effects of curriculum and content ($\beta = -0.079$, $p = 0.601$) and social networking ($\beta = -0.030$, $p = 0.463$) was not significant, respectively. The results are important qualifications to the overall model. While the influence of social networking on entrepreneurial intention is significant, the indirect pathway of social networking on entrepreneurial intention via entrepreneurial drive was not supported. Likewise, no significant mediation effect was found for curriculum, which implies that just presenting students with material information already in the curriculum is not enough to create the psychological motivation of entrepreneurial intention. The results

indicate that besides the presence of entrepreneurship-related inputs, their quality, relevance, intensity, and practical effectiveness must be considered.

The results are broadly consistent with the merits of combining institutional and social factors in the explanations of agropreneurial intention. The study builds on the theory of planned behavior by adding the institutional and social factors, and by placing entrepreneurial drive as an intervening mechanism. The findings indicate that students' entrepreneurial intentions are formed as a result of the interaction between the learning environment, social context, external institutional support, and perceptions of entrepreneurial desirability and feasibility. The findings thus offer a more holistic understanding of agropreneurial intention than models that examine solely individual-level characteristics or entrepreneurship training.

5.2 Recommendations of the Study

After analysis of the empirical results, the following recommendations could be proposed to universities, policy makers, government institutions, families and other stakeholders for encouraging agropreneurship among agriculture students. First of all, the university must create a more supportive and entrepreneurial institutional environment. The university support perceived by the respondents is significantly associated with entrepreneurial drive, suggesting that students' perception of their universities as supportive of entrepreneurial activities would increase their agropreneurial motivation. Henceforth, agricultural universities and higher education institutions should organize entrepreneurship forums, mentoring programmes, business development centres, incubation facilities, and provide practical avenues for interaction with successful agropreneurs so that students can learn from their experiences. Such efforts can build students' confidence and their understanding of agropreneurship as an attractive and feasible career choice. Second, Universities should enhance the practice-based approach of Agropreneurship Education. In the present study, curriculum and content were not found to significantly influence entrepreneurial drive, but this result should be interpreted as a signal that the current curriculum may not adequately address the needs of the practical aspects of modern agricultural entrepreneurship. In this regard, curriculum developers should review and revise the existing agricultural courses to include practical entrepreneurial skills, opportunity recognition, marketing, communication, value addition, business planning, financial management, technical skills, and research. More attention needs to be paid to experiential learning, field projects, agricultural entrepreneurship, case studies, business simulations, and interactions with practising agropreneurs. This would help to overcome the gap between theoretical agricultural education and practical needs for launching and running an agricultural enterprise. The study also revealed that this current curriculum did not play a significant role in supporting entrepreneurial drive, which again necessitates a review of the curriculum. Thirdly, the government and policy makers should increase the institutional support for young agropreneurs. The perceived government support was the most significant

predictor of entrepreneurial drive ($\beta = 0.832$, $p < 0.001$), indicating the unique contribution of the government in motivating students to pursue agropreneurship. Government agencies must thus design policies and programmes to promote access to finance, agricultural technology, training, infrastructure, markets, and business development services. The need to establish agricultural enterprises may be further eased by simplified procedures and by targeted support programmes for young people who have completed their studies. Fourth, the attention should be paid to social environment of agricultural students. The effect of subjective norms seems to be rather significant, indicating that influential people and family members may have a significant influence on students' entrepreneurial motivation. Thus, the universities and policy makers should arrange awareness programmes and agropreneurship campaigns to encourage entrepreneurship as an acceptable and sustainable career option. Agropreneurs can be invited as role models to share their experience and issues, failures and successes with the students. These interactions can help to alter the perception of agricultural careers and show how business opportunities can be gained in the modern farm sector. Fifth, although the mediation analysis did not find a significant indirect effect of social networking on agropreneurial intention via entrepreneurial drive, there is still a need to expand opportunities for social networking. The direct relationship between social networking and entrepreneurial drive is significant, suggesting that networks are still relevant to develop students' entrepreneurial motivation. The universities can provide a platform for networking and connecting students, agricultural entrepreneurs, industry representatives, financial institutions, government bodies, agricultural technology providers and potential investors. These networks can offer students opportunities to gain access to knowledge, market information, resources, mentorship, and opportunities for business. Last but not least, a coordinated multi-stakeholder approach is recommended. The result shows that education alone is not adequate for promoting agropreneurship. There is an entrepreneurial ecosystem that includes university support, government policies, social expectations, networking opportunities, and students' entrepreneurial drive. Thus, it is recommended that universities, the government, industry, families and agricultural organizations work together to foster an agropreneurship-friendly environment for young agricultural graduates, where they are able to see opportunities, build entrepreneurial skills, have access to the resources and feel free to pursue agropreneurship as their profession. This comprehensive approach can help to generate jobs, marketize agriculture and foster general economic growth.

5.3. Limitations and Future Direction

The study has several limitations that offer opportunities for future research. First, the study was conducted with final year students studying agriculture or related subjects in the public sector higher education institutions of China and Pakistan. Therefore, the results are not necessarily representative of students at other private institutions, other subjects studied, or of young people already

involved in agriculture businesses. Thus, future studies could investigate current young agropreneurs instead of only students. This would lead to a better understanding of the real-world experiences, opportunities, assets, and institutional constraints of existing agropreneurs. Second, the study used entrepreneurial intention as the outcome variable and entrepreneurial drive as a mediating variable. Further research may explore the reverse relationship, i.e., entrepreneurial intention as a mediation variable and entrepreneurial drive as a dependent variable. This way, the researcher can gain more insight into the interactions between the intentions and motivational perceptions of students in developing agropreneurial behavior. Third, the present study adopted certain institutional and social variables: curriculum and content, perceived university support, subjective norms, social networking and perceived government support. The conceptual model can be further expanded in future studies with other variables that include agropreneurship education, institutional characteristics, behavioural factors, media influence, and especially social media. Analyzing these other factors can offer more holistic insight into the multifaceted processes involved in the formation of agropreneurial motivation and intentions in young people. Fourthly, future studies should employ a wider and more varied sample. The relationships found in the present study could be replicated in additional emerging economies, such as countries in the Gulf, Asia, and Europe, through comparative studies. These comparative analyses across countries may reveal contextual differences regarding the influence of university support, government policies, social norms, networking and curriculum on agropreneurial drive and intention. Lastly, future research could go beyond the entrepreneurial intention and investigate actual agropreneurial behaviour or venture creation. Intention does not equate to actual entrepreneurial action, so longitudinal studies should be conducted after graduation to see if the entrepreneurial drive and intention among agricultural students translates to the development of agricultural enterprises. Such research would give a better idea about the effectiveness of university support, government interventions, social networks and entrepreneurship education to make entrepreneurial intentions into real agropreneurial activities. Overall, the limitations offer significant directions for further research endeavors and underlines the importance of wider, comparative and longitudinal studies on agropreneurship. Further research integrating other individual, institutional, social, behavioral and technological factors can add to an overall understanding of agropreneurial development. Such evidence can help universities, governments, policy makers and other stakeholders to develop more effective interventions to create a sustainable and supportive agropreneurial ecosystem.

References

- Abdullah, F. A., & Samah, B. A. (2014). Factors influencing inclination toward agriculture entrepreneurship among students in agriculture learning institute. *Asian Social Science*, 10(2), 273-278.

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211.
- Ajzen, I. (2001). Nature and operation of attitudes. *Annual Review of Psychology*, 52(1), 2758.
- Alam, G. M., Hoque, K. E., Khalifa, M. T. B., Siraj, S. B., & Ghani, M. F. B. A. (2009). The role of agriculture education and training on agriculture economics and national development of Bangladesh. *Afr. J. Agric. Res*, 4(12), 1334-1350.
- Alam, M. M., Siwar, C., Murad, M. W., Molla, R. I., & Toriman, M. E. (2010). Socioeconomic profile of farmer in Malaysia: Study on integrated agricultural development area in North-West Selangor. *Agricultural Economics and Rural Development, New Series*, 7(2), 249-265.
- Alhaj, B. K., Baharuddin, E., Dahari, S. H. (2015). The Relationship of the Antecedent Factors of Entrepreneurial Intention with Entrepreneurial Intention: A Case Study. *Global Journal of Business and Social Science* 4(1): 486-498.
- Ali, S., Lu, W., & Wang, W. (2012). Determinants of entrepreneurial intentions among the college students in: China and Pakistan. *Journal of Education and Practice*, 3(11), 13-21.
- Alliance for a Green Revolution in Africa (AGRA) (2015). Africa Agriculture Status Report: Youth in Agriculture in Sub-Saharan Africa. Nairobi, Kenya. (3), 229.
- Aman, Z., Abdul Rahim, A. R., & Din, A. K. (2015). Generation Y perceptions of employment in the plantation sector. *International Journal of Recent Advances in Organizational Behaviour and Decision Sciences*, 1(4), 605-616.
- Amegnaglo, C. J., Soglo, Y. Y., Akpa, A. F., & d'Oliveira, G. (2014, September). Determinants of graduate students' participation in agricultural value chain in Benin. In *9th Conference of the Asian Federation for Information Technology in Agriculture "ICT's for future Economic and Sustainable Agricultural Systems* (29-38).
- Ariff, M., & Abubakar, S. Y. (2003). Strengthening entrepreneurship in Malaysia. Unpublished manuscript. Malaysian Institute of Economic Research, Kuala Lumpur: Retrieved from http://www.mansfieldfdn.org/backup/programs/program_pdfs/ent_malaysia.pdf.
- Autio, E., Keeley, R. H., Klofsten, M., Parker, G. G. C., & Hay, M. (2001). Entrepreneurial intent among students in Scandinavia and in the USA. *Enterprise and Innovation Management Studies*, 2(2), 145-160.
- Bairwa, S. L., Lakra, K., Kushwaha, S., Meena, L. K., & Kumar, P. (2014). Agripreneurship development as a tool to upliftment of agriculture. *International Journal of Scientific and Research Publications*, 4(3), 1-4.

- Bell, R. (2015). Developing the next generation of entrepreneurs: Giving students the opportunity to gain experience and thrive. *The International Journal of Management Education*, 13(1), 37-47.
- Bojang, F. and Ndeso-Atanga, A. (2013). African Youth in Agriculture, Natural Resources and Rural Development. *Journal of Nature & Fauna* 28(1), 1-106.
- Bruton, G. D., Ketchen Jr, D. J., & Ireland, R. D. (2013). Entrepreneurship as a solution to poverty. *Journal of business venturing*, 28(6), 683-689.
- Buttar, H. M. (2015). Formation of entrepreneurial career intentions: the role of sociocognitive factors. *Journal of Employment Counseling*, 52(1), 2-17.
- Byabashaija, W., & Katono, I. (2011). The impact of college entrepreneurial education on entrepreneurial attitudes and intention to start a business in Uganda. *Journal of Developmental Entrepreneurship*, 16(1), 127-144.
- Chang, H. C., Tsai, K. H., & Peng, C. Y. (2014). The entrepreneurial process: an integrated model. *International Entrepreneurship and Management Journal*, 10(4), 727-745.
- Christian, H. (2002). In focus Programme on Skills, Knowledge and Employability: New evidence from Kenya, Tanzania and Uganda. ILO Office, Geneva. (93).
- Dhanapal Chelliah, S., & Christopher, B. P. (2025). Agripreneurial intents among South Indian youth: the role of entrepreneurial orientation, mediated by agribusiness attitude. *Journal of Agribusiness in Developing and Emerging Economies*, 1-21.
- D'souza, A. P. (2013). Unorganized sectors: role of an entrepreneur and challenges in self-employment. *International Journal of Scientific and Research Publications*, 3(6), 1-5.
- Díaz-Pichardo, R., Cantú-González, C., López-Hernández, P., & McElwee, G. (2012). From farmers to entrepreneurs: The importance of collaborative behaviour. *The Journal of Entrepreneurship*, 21(1), 91-116.
- Dissanayake, D. M. N. S. W. (2014). The impact of perceived desirability and perceived feasibility on entrepreneurial intention among undergraduate students in Sri Lanka: An extended model. *Kelaniya Journal of Management*, 2(1), 39-57.
- Donckels, R. (1991). Education and entrepreneurship experiences from secondary and university education in Belgium. *Journal of Small Business & Entrepreneurship*, 9(1), 35-42.
- Drennan, J., Kennedy, J., & Renfrow, P. (2005). Impact of childhood experiences on the development of entrepreneurial intentions. *The International Journal of Entrepreneurship and Innovation*, 6(4), 231-238.
- Drost, E. A. (2010). Entrepreneurial intentions of business students in Finland: implications for education. *Advances in Management*, 3(7), 28-35.

- Eissler, S., & Brennan, M. (2015). Review of research and practice for youth engagement in agricultural education and training systems. *Nairobi: Paulines Publications Africa*.
- Entrialgo, M., & Iglesias, V. (2016). The moderating role of entrepreneurship education on the antecedents of entrepreneurial intention. *International Entrepreneurship and Management Journal*, 12(4), 1209-1232.
- Farashah, A. D. (2013). The process of impact of entrepreneurship education and training on entrepreneurship perception and intention: Study of educational system of Iran. *Education+ Training*, 55(8/9), 868-885.
- Fatoki, O. O. (2010). Graduate entrepreneurial intention in South Africa: Motivations and obstacles. *International Journal of Business and Management*, 5(9), 87-98.
- Fayolle, A., & Liñán, F. (2014). The future of research on entrepreneurial intentions. *Journal of Business Research*, 67(5), 663-666.
- Fernández-Pérez, V., Alonso-Galicia, P. E., del Mar Fuentes-Fuentes, M., & Rodríguez-Ariza, L. (2014). Business social networks and academics' entrepreneurial intentions. *Industrial Management & Data Systems*, 114(2), 292-320.
- Fitzsimmons, J. R., & Douglas, E. J. (2011). Interaction between feasibility and desirability in the formation of entrepreneurial intentions. *Journal of business venturing*, 26(4), 431-440.
- Franke, N., & Lüthje, C. (2004). Entrepreneurial intentions of business students—A benchmarking study. *International journal of innovation and technology management*, 1(03), 269-288.
- Freitas, C., Franco, M., Gonçalves, F., & Almeida, A. (2025). Social-cultural influence on university graduate's entrepreneurial intention: Evidence from a Portuguese university. *Social Sciences & Humanities Open*, 11, 101627.
- Friedrich, C. & Visser, K. (2005). South African entrepreneurship education and training. Cape Town: Leap Publishing CC.
- Galvão, A. R., Marques, C. S., Mendes, T., & Azevedo, C. (2025). How does perceived university support boost students' entrepreneurial intentions?. *Journal of the Knowledge Economy*, 16(3), 12698-12726.
- García-Rodríguez, F. J., Gil-Soto, E., Ruiz-Rosa, I., & Sene, P. M. (2015). Entrepreneurial intentions in diverse development contexts: a cross-cultural comparison between Senegal and Spain. *International Entrepreneurship and Management Journal*, 11(3), 511-527.
- Gerry, C., Marques, C. S., & Nogueira, F. (2008). Tracking student entrepreneurial potential: personal attributes and the propensity for business start-ups after graduation in a Portuguese university. *Problems and Perspectives in Management*, 6(4), 45-53.
- Geza, W., Ngidi, M. S. C., Slotow, R., & Mabhaudhi, T. (2022). The dynamics of youth employment and empowerment in agriculture and rural development in South Africa: A scoping review. *Sustainability*, 14(9), 5041.

- Ghiasi, F. G., Hosseini, S. J. F., Malekmohammado, I., & Hosseini, S. M. (2009). Factors influencing the entrepreneurship in Iran's agricultural cooperatives. *Australian Journal of Basic and Applied Sciences*, 3(2), 1170–1176.
- Giagtzi, Z. (2013). How perceived feasibility and desirability of entrepreneurship influence entrepreneurial intentions: A comparison between southern and northern European countries. (Master Thesis), Erasmus University Rotterdam, Netherlands.
- Giordano Martínez, K. R., Herrero Crespo, Á., & Fernández-Laviada, A. (2017). Influence of perceived risk on entrepreneurial desirability and feasibility: multidimensional approach for nascent entrepreneurs. *Journal of Risk Research*, 20(2), 218-236. doi: 10.1080/13669877.2015.1042506
- Gnyawali, D., & Fogel, D. (1994). Environments for entrepreneurship development: Key dimensions and research implications. *Entrepreneurship Theory & Practice*, 18(4), 43-62.
- Gu, W., & Wang, J. (2022). Research on index construction of sustainable entrepreneurship and its impact on economic growth. *Journal of Business Research*, 142, 266-276.
- Gurol, Y., & Atsan, N. (2006). Entrepreneurial characteristics amongst university students: Some insights for entrepreneurship education and training in Turkey. *Education+ Training*, 48(1), 25–38.
- Hair, J. F., Black, W., Babin, B., & Anderson, R. (2010). *Multivariate Data Analysis: A Global Perspective*. New Jersey: Pearson Prentice Hall.
- Harris, T., & Consulting, T. H. (2014). Africa agriculture status report 2014: Climate change and smallholder agriculture in Sub-Saharan Africa (No. BOOK). Alliance for a Green Revolution in Africa (AGRA).
- Hashemi, S. M. K., Hosseini, S. M., & Rezvanfar, A. (2012). Explaining entrepreneurial intention among agricultural students: Effects of entrepreneurial self-efficacy, and college entrepreneurial orientation. *Research Journal of Business Management*, 6(3), 94-102.
- Hattab, H. W. (2014). Impact of entrepreneurship education on entrepreneurial intentions of university students in Egypt. *Journal of Entrepreneurship*, 23(1), 1-18.
- Heanue, K., & O'Donoghue, C. (2014). The economic returns to formal agricultural education. *Teagasc: Oak Park Carlow*, 2.
- Heinert, S. and Roberts, T.G. (2016). Engaging Rural Youth in Entrepreneurship through Extra-curricular and Co-curricular Systems. Innovation for Agricultural Training and Education. University of Florida. USAID-Funded Project. 41.
- Heinonen, J. (2007). An entrepreneurial-directed approach to teaching corporate entrepreneurship at university level. *Education+ Training*, 49(4), 310-324.
- Hoang, H., & Antoncic, B. (2003). Network-based research in entrepreneurship: A critical review. *Journal of Business Venturing*, 18(2), 165-187.

- Hou, F., Su, Y., Lu, M., & Qi, M. (2019). Model of the entrepreneurial intention of university students in the Pearl River Delta of China. *Frontiers in psychology*, 10, 916.
- Hrangao, R. B., & Sorokhaiban, R. (2015). Enterprising the farmer entrepreneur. *Internafional Journal of Social Sciences Invenfion*, 4(4), 28-34.
- Hynes, B., Costin, Y., & Birdthistle, N. (2010). Practice-based learning in entrepreneurship education: a means of connecting knowledge producers and users. *Higher Education, Skills and Work-based Learning*, 1(1), 16-28.
- Iakovleva, T., & Kolvereid, L. (2009). An integrated model of entrepreneurial intentions. *International Journal of Business and Globalisation*, 3(1), 66-80.
- International Labour Organisation (2014). Global Employment Trends. ILO, Geneva. (120).
- Jochaud, P. (2014). Youth productive employment through entrepreneurship development in the Arab Region: State of the art of interventions in Egypt and Tunisia. United Nations Industrial Development Organization (UNIDO).
- Joensuu-Salo, S., Varamäki, E., & Viljamaa, A. (2015). Beyond intentions—what makes a student start a firm? *Education+ Training*, 57(8/9), 853-873.
- Jorge-Moreno, J. D., Castillo, L. L., & Triquero, M. S. (2012). The effect of business and economics education programs on students' entrepreneurial intention. *European Journal of Training and Development*, 36(4), 409-425.
- Joseph, E. (2025). Impact of Hybrid Entrepreneurs on Economic Development and Job Creation. In *Applications of Career Transitions and Entrepreneurship* (pp. 61-82). IGI Global Scientific Publishing.
- Kabutiei, J. K., Maina, S., & Mutuku, M. (2025). Training in agriculture as predictor of agripreneurial intentions of agricultural students in Kenyan TVET Institutions. *Journal of Advanced Education and Sciences*, 5(4), 01-10.
- Kahan, D. (2012). Entrepreneurship in farming. Rome, Italy: Food and Agricultural Organization of United Nations Retrieved from <http://www.fao.org/uploads/media/5EntrepreneurshipInternLores.pdf>.
- Kassean, H., Vanevenhoven, J., Liguori, E., & Winkel, D. E. (2015). Entrepreneurship education: a need for reflection, real-world experience and action. *International journal of Entrepreneurial Behavior & research*, 21(5), 690–708.
- Kaya, H.D. (2019). Government Support, Entrepreneurial Activity and Firm Growth. *SocioEconomic Challenges*, 3(2), 5-12. [https://doi.org/10.21272/sec.3\(3\).5-12.2019](https://doi.org/10.21272/sec.3(3).5-12.2019)
- Keat, O. Y., Selvarajah, C., & Meyer, D. (2011). Inclination towards entrepreneurship among university students: An empirical study of

- Malaysian university students. *International Journal of Business and Social Science*, 2(4), 206-220.
- Khan, S., & Shah, S. I. (2020). Effect of Government Support on Entrepreneurial Culture: Moderating Role of Education Institutions Support in Pakistan. *NICE Research Journal*, 158-180.
- Kraaijenbrink, J., Bos, G., & Groen, A. (2010). What do students think of the entrepreneurial support given by their universities? *International Journal of Entrepreneurship and Small Business*, 9(1), 110-125.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and psychological measurement*, 30(3), 607-610.
- Krueger, N. F., & Kickul, J. (2006). So you thought the intentions model was simple? Navigating the complexities and interactions of cognitive style, culture, gender, social norms, and intensity on the pathway to entrepreneurship. Paper presented at the United States Association Small Business and Entrepreneurship Conference, Tucson, AZ.
- Kusis, J., Miltovica, B., & Feldmane, L. (2014). Lithuanian and latvian urban youth perceptions and stereotypes of farmer and agriculture. *Regional formation and development studies*, (3), 148-156.
- Lee, L., Wong, P. K., Der Foo, M., & Leung, A. (2011). Entrepreneurial intentions: The influence of organizational and individual factors. *Journal of business venturing*, 26(1), 124-136.
- Lent, R. W., Brown, S. D., & Hackett, G. (2000). Contextual supports and barriers to career choice: A social cognitive analysis. *Journal of counseling psychology*, 47(1), 36.
- Lerner, J. (2005). The university and the start-up: lessons from the past two decades. *The Journal of Technology Transfer*, 30(1-2), 49-56.
- Liñán, F., & Chen, Y. W. (2009). Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. *Entrepreneurship Theory & Practice*, 33(3), 593-617.
- Liñán, F., Nabi, G., & Krueger, N. (2013). British and Spanish entrepreneurial intentions: A comparative study. *Revista de economía Mundial*, 33, 73-103.
- Liñán, F., Rodríguez-Cohard, J. C., & Rueda-Cantuche, J. M. (2011). Factors affecting entrepreneurial intention levels: A role for education. *International Entrepreneurship and Management Journal*, 7(2), 195-218.
- Liu, Q., & Yao-Ping Peng, M. (2025). Exploring factors influencing university students' entrepreneurial intentions: The role of attitudes, beliefs, and environmental support. *PloS one*, 20(1), e0316392.
- Lüthje, C., & Franke, N. (2004). Entrepreneurial intentions of business students: A benchmarking study. *International Journal of Innovation and Technology Management*, 1(3), 269-288.
- Mahmud, M. M. A., Mohamed, Z., Rezai, G., & Shamsudin, M. N. (2011, September). The influence of personality traits and demographic factors on agro-entrepreneurship education among graduates. In IEDRC (International Economics Development and Research Center),

- International Conference on Innovation, Management and Service*. Singapore, Singapore (pp. 16-18).
- Makerere University Kampala. (2006). Employment opportunities and performance of Makerere University graduates: A tracer study of graduates in the fields of agriculture and veterinary medicine (1991–2001) final report (91).
- Malebana, M. (2014). The effect of knowledge of entrepreneurial support on entrepreneurial intention. *Mediterranean Journal of Social Sciences*, 5(20), 1020-1028.
- Mian, S. A. (1996). Assessing value-added contributions of university technology business incubators to tenant firms. *Research Policy*, 25(3), 325-335.
- Miralles, F., Giones, F. and Riverola, C. (2015). Evaluating the impact of prior experience in entrepreneurial intention. *International Entrepreneurship and Management Journal*, 12(3), 791-813.
- Mohamed, Z., Rezai, G., Nasir Shamsudin, M., & Mu'az Mahmud, M. (2012). Enhancing young graduates' intention towards entrepreneurship development in Malaysia. *Education+ Training*, 54(7), 605-618.
- Mohammad Nor, N. A. A., Nik Mohd Masdek, N. R., & Maidin, M. K. H. (2015). Youth inclination towards agricultural entrepreneurship. *Economic and Technology Management Review*, 10a, 47-55.
- Mohd. Nasurdin, A., Ahmad, N. H., & Lin, C. E. (2009). Examining a model of entrepreneurial Intention among Malaysians using SEM procedure. *European Journal of Scientific Research*, 33(2), 365-373.
- Mugisha, J., & Nkwasiwe, A. (2014). Capacity development for Modernizing African Food Systems (MAFS). *Tracer study of agricultural graduates in Uganda*. Michigan State University (MAFS Working Paper No. 6 (30).
- Muhammad, M., Ismail, A. A., & Rak, A. E. (2013). Competency of agriculture graduates in Malaysian public universities. *International Journal of Enhanced Research in Educational Development*, 1(1), 1-9.
- Murugesan, R., & Jayavelu, R. (2015). Testing the impact of entrepreneurship education on business, engineering and arts and science students using the theory of planned behaviour: A comparative study. *Journal of Entrepreneurship in Emerging Economies*, 7(3), 256-275.
- Mustafa, M. J., Hernandez, E., Mahon, C., & Chee, L. K. (2016). Entrepreneurial intentions of university students in an emerging economy: The influence of university support and proactive personality on students' entrepreneurial intention. *Journal of Entrepreneurship in Emerging Economies*, 8(2), 162-179.
- Nagalakshmi, T., & Sudhakar, A. (2013). Agripreneurs: a case study of Dharmapuri farmers. *International Journal of Science and Research*, 2(8), 208-214.
- Nimalathasan, B., & Achchuthan, S. (2012). Entrepreneurial motivation and self employment intention: A case study on management undergraduates

- of University of Jaffna. Paper presented at the International Conference on Business and Information (ICBI 2012), Western, Sri Lanka.
- Ollila, S., & Williams-Middleton, K. (2011). The venture creation approach: integrating entrepreneurial education and incubation at the university. *International Journal of Entrepreneurship and Innovation Management*, 13(2), 161-178.
- Osabohien, R., Worgwu, H., Rafi, S. K., Adediran, O., Matthew, O., & Aderounmu, B. (2022). Impact of business innovation on future employment in Nigeria. *Managerial and Decision Economics*, 43(8), 3795-3806.
- Osikabor, B., Adesope, A. A., Ibrahim, A. G., Ibrahim, F. M., Babayemi, O. F., & Olatunji, B. T. (2011). Animal-agriculture Based Entrepreneurship: Descriptive Norms, Perceived Economic Viability and Behavioural Intention among Final Year Agriculture Related Students in Ibadan, Nigeria. *Asian Journal of Agricultural Sciences*, 3(2), 87-93.
- Peng, Z., Lu, G., & Kang, H. (2013). Entrepreneurial intentions and its influencing factors: A survey of the university students in Xi'an, China. *Creative Education*, 3(08), 95-100.
- Percy-Smith, A. and Akkermans, L. (2012). Skill Gaps in Formal Higher Agricultural Education: A Youth Perspective. Young Professionals' Platform for Agricultural Research for Development (YPARD), 5.
- Peterman, N. E., & Kennedy, J. (2003). Enterprise education: Influencing students' perceptions of entrepreneurship. *Entrepreneurship theory and practice*, 28(2), 129-144.
- Pouratashi, M. (2014). Entrepreneurial intentions of agricultural students: Levels and determinants. *The Journal of Agricultural Education and Extension*, 21(5), 467-477.
- Quan, X. (2012). Prior experience, social network, and levels of entrepreneurial intentions. *Management Research Review*, 35(10), 945-957.
- Ramdwar, M. N. and Ganpat, W.G. (2010). Likelihood of Students in the Formal Education System in Trinidad to Pursue Agriculture as a Profession and the Implications for Development. *Journal of Agricultural Education*, 51 (4), 28 – 37.
- Rampersad, G., Troshani, I., & Plewa, C. (2012). IOS adoption in innovation networks: A case study. *Industrial Management & Data Systems*, 112(9), 1366-1382.
- Rauch, A., & Hulsink, W. (2015). Putting entrepreneurship education where the intention to act lies: An investigation into the impact of entrepreneurship education on entrepreneurial behavior. *Academy of Management Learning & Education*, 14(2), 187-204.
- Rezai, G., Mohamed, Z., & Shamsudin, M. N. (2011). Informal education and developing entrepreneurial skills among farmers in Malaysia. *International Journal of Humanities and Social Sciences*, 5(7), 906-913.

- Sadeghi, M., Mohammadi, M., Nosrati, M., & Malekian, K. (2013). The role of entrepreneurial environments in university students entrepreneurial intention. *World Applied Programming*, 3(8), 361-366.
- Saeed, S., Muffatto, M., & Yousafzai, S. Y. (2014). Exploring intergenerational influence on entrepreneurial intention: the mediating role of perceived desirability and perceived feasibility. *International Journal of Entrepreneurship and Innovation Management*, 18(2/3), 134-153.
- Saeed, S., Yousafzai, S. Y., Yani-De-Soriano, M., & Muffatto, M. (2015). The role of perceived university support in the formation of students' entrepreneurial intention. *Journal of Small Business Management*, 53(4), 1127-1145.
- Sajjad, S. I., Shafi, H., & Dad, A. M. (2012). Impact of culture on entrepreneur intention. *Information Management & Business Review*, 4(1), 30-34.
- Sanginga, N., Lohento, K., & Mayenga, D. (2015). Youth in Agribusiness within an African Agricultural Transformation Agenda 2015. *Proceedings of the Youth in Agribusiness—Feeding Africa, Dakar, Senegal*, 21-25.
- Santos, F. J., Roomi, M. A., & Liñán, F. (2016). About gender differences and the social environment in the development of entrepreneurial intentions. *Journal of Small Business Management*, 54(1), 49-66.
- Schlaegel, C., & Koenig, M. (2014). Determinants of entrepreneurial intent: A meta-analytic test and integration of competing models. *Entrepreneurship Theory & Practice*, 38(2), 291-332.
- Schwarz, E. J., Wdowiak, M. A., Almer-Jarz, D. A., & Breitenacker, R. J. (2009). The effects of attitudes and perceived environment conditions on students' entrepreneurial intent: An Austrian perspective. *Education+ Training*, 51(4), 272-291.
- Selamat, Z., & Nasir, A. M. (2013). Efficiency measurement of Malaysian agriculture firms. *International Journal of Trade, Economics and Finance*, 4(2), 79.
- Semrau, T. & Werner, A. (2014). How exactly do network relationships pay off? The effects of network size and relationship quality on access to start-up resources. *Entrepreneurship Theory and Practice*, 38(3), 501-525.
- Shiri, N., Alibaygi, A., & Faghin, M. (2013). Factors affecting entrepreneurial motivation of agricultural students at Razi University. *International Journal of Agricultural Management and Development (IJAMAD)*, 3(1047-2016-85522), 175-180.
- Shiri, N., Mohammadi, D., & Hosseini, S. M. (2012). Entrepreneurial intention of agricultural students: effects of role model, social support, social norms and perceived desirability. *Archives of Applied Science Research*, 4(2), 892-897.
- Singh, B., Verma, P., & Rao, M. K. (2017). Influence of individual and socio-cultural factors on entrepreneurial intention. *Entrepreneurship Education: Experiments with Curriculum, Pedagogy and Target Groups*, 149-169.

- Sinyolo, S., & Mudhara, M. (2018). The impact of entrepreneurial competencies on household food security among smallholder farmers in KwaZulu Natal, South Africa. *Ecology of food and nutrition*, 57(2), 71-93.
- Solesvik, M. Z., Westhead, P., Kolvereid, L., & Matlay, H. (2012). Student intentions to become self-employed: the Ukrainian context. *Journal of Small Business and Enterprise Development*, 19(3), 441-460.
- Souitaris, V., Zerbinati, S., & Al-Laham, A. (2007). Do entrepreneurship programmes raise entrepreneurial intentions of science and engineering students? The effect of learning, inspiration and resources. *Journal of Business Venturing*, 22(4), 566-591.
- Sri, M., & Heru, I. (2018). The influence of individual and environmental factor to the organic rice farming performance and entrepreneurial behaviour as mediation variables. *Russian Journal of Agricultural and Socio-Economic Sciences*, 81(9), 476-483.
- Taormina, R. J., & Lao, S. K.-M. (2007). Measuring Chinese entrepreneurial motivation: Personality and environmental influences. *International Journal of Entrepreneurial Behaviour & Research*, 13(4), 200-221.
- Tatarko, A., & Schmidt, P. (2016). Individual social capital and the implementation of entrepreneurial intentions: The case of Russia. *Asian Journal of Social Psychology*, 19(1), 76-85.
- Thompson, E. R. (2009). Individual entrepreneurial intent: Construct clarification and development of an internationally reliable metric. *Entrepreneurship Theory & Practice*, 33(3), 669-694.
- Tripopsakul, S. (2025). Social norms, attitudes, self-efficacy, and entrepreneurial intentions: Moderating roles of education, risk tolerance, and innovation orientation. *International Journal of Analysis and Applications*, 23, 74-74.
- United Republic of Tanzania and International Institute for Educational Planning (2011). *Tanzania: Education Sector Analysis: Beyond Primary Education, the Quest for Balanced and Efficient Policy Choices for Human Development and Economic Growth*. UNESCO, Dakar Office, (339).
- Vatavu, S., Dogaru, M., Moldovan, N. C., & Lobont, O. R. (2022). The impact of entrepreneurship on economic development through government policies and citizens' attitudes. *Economic Research-Ekonomska Istraživanja*, 35(1), 1604-1617.
- Walter, S. G., Parboteeah, K. P., & Walter, A. (2013). University departments and selfemployment intentions of business students: A cross-level analysis. *Entrepreneurship Theory and Practice*, 37(2), 175-200.
- Weidinger, R., Youdeowei, A., Mwaura, G., & Quaye, E. (2015). Agricultural Entrepreneurship: Transforming African Youth Livelihoods through Agribusiness Development. *Nairobi, Kenya. Issue*, (3).
- Wennekers, S., & Thurik, R. (1999). Linking entrepreneurship and economic growth. *Small Business Economics*, 13(1), 27-56.

- White, B. (2012). Agriculture and the generation problem: rural youth, employment and the future of farming. *ids Bulletin*, 43(6), 9-19.
- Yousaf, U., Shamim, A., Siddiqui, H., & Raina, M. (2015). Studying the influence of entrepreneurial attributes, subjective norms and perceived desirability on entrepreneurial intentions. *Journal of Entrepreneurship in Emerging Economies*, 7(1), 23-34.
- Yusoff, A., Ahmad, N., & Halim, H. (2015). Promoting Agropreneurship among Gen Y: An Integration of Individual, Institutional and Social Level Factors. *Australian Journal of Basic and Applied Sciences*, 9(14), 74-86.
- Zagata, L. & Lostak, M. (2013). Farming Transitions: Pathways towards Regional Sustainability of Agriculture in Europe. Czech University of Life Sciences Prague .Czech Republic. 29pp.
- Zakaria, H. Adam, H. and Abujaja, A. H. (2014). Assessment of Agricultural Students of University for Development Studies Intention to Take up Self-employment in Agribusiness. *International Journal of Information Technology and Business Management*, 21(1), 53-67.
- Zampetakis, L. A., Anagnosti, A., & Stelios Rozakis, S. (2013). Understanding entrepreneurial intentions of students in agriculture and related sciences. Paper presented at the EAAE 2014 Congress - Agri-Food and Rural Innovations for Healthier Societies, Ljubljana, Slovenia.
- Zarkua, T., Heijman, W., Benešová, I., & Krivko, M. (2025). Entrepreneurship as a driver of economic development. *Entrepreneurial Business and Economics Review*, 13(1), 61-77.